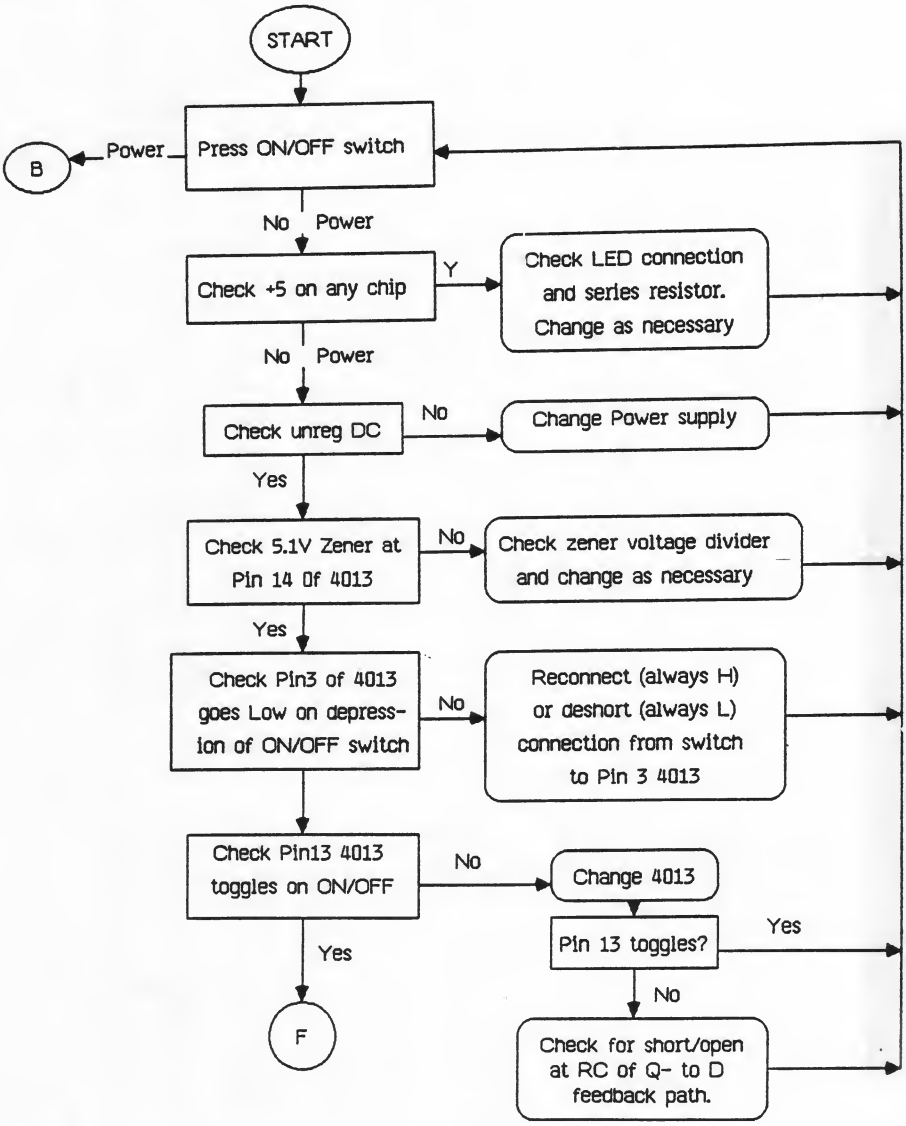
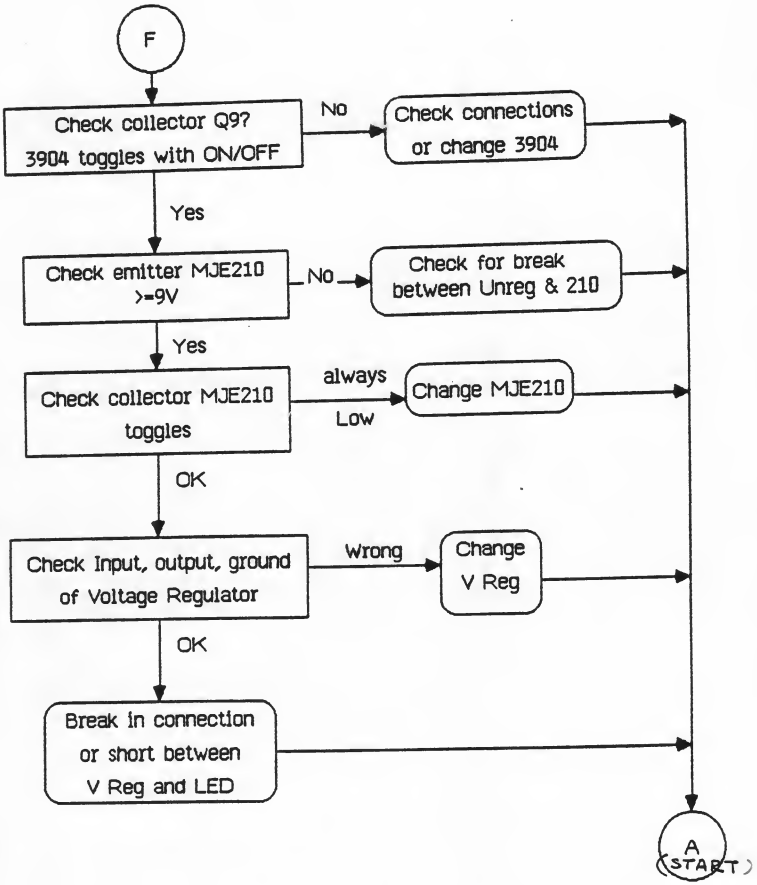
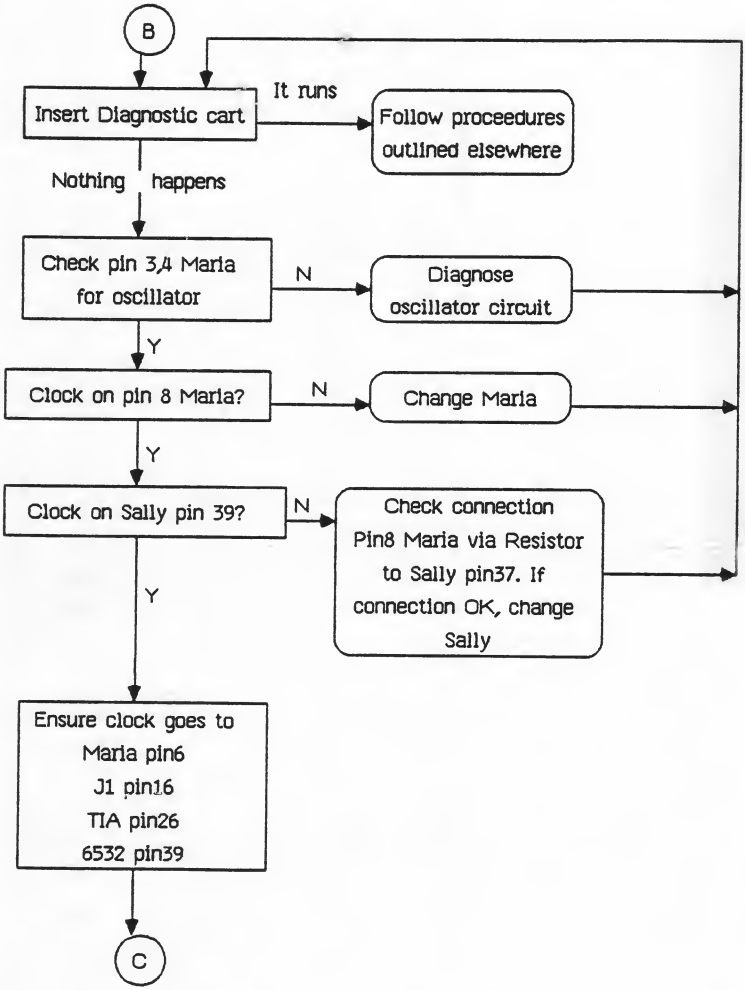
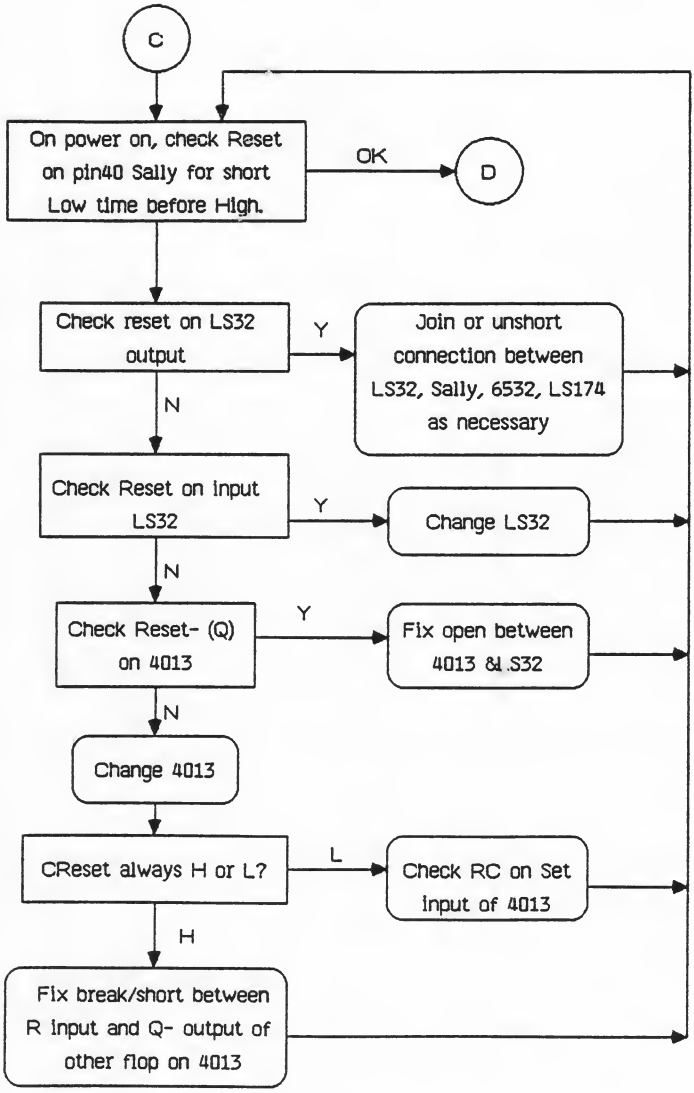
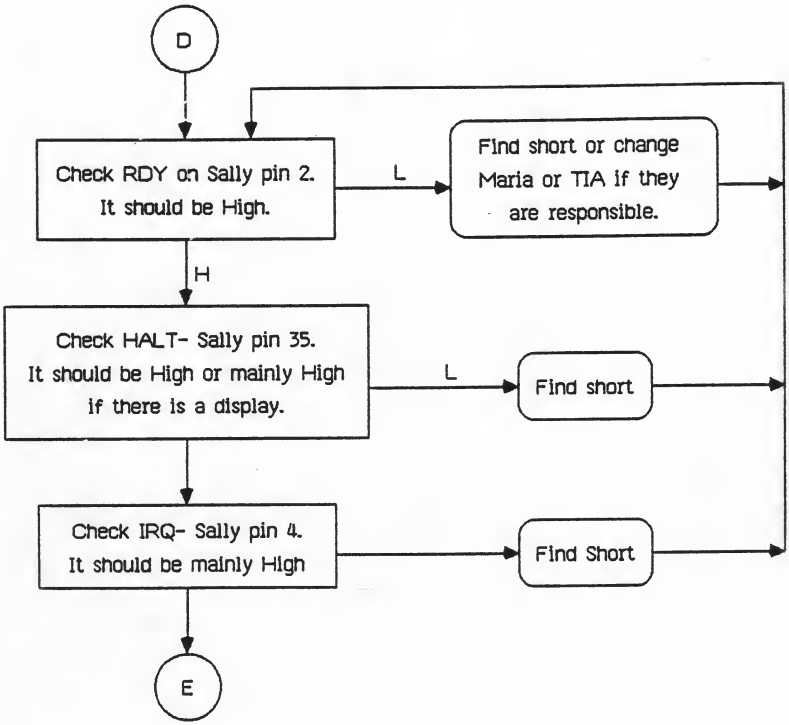
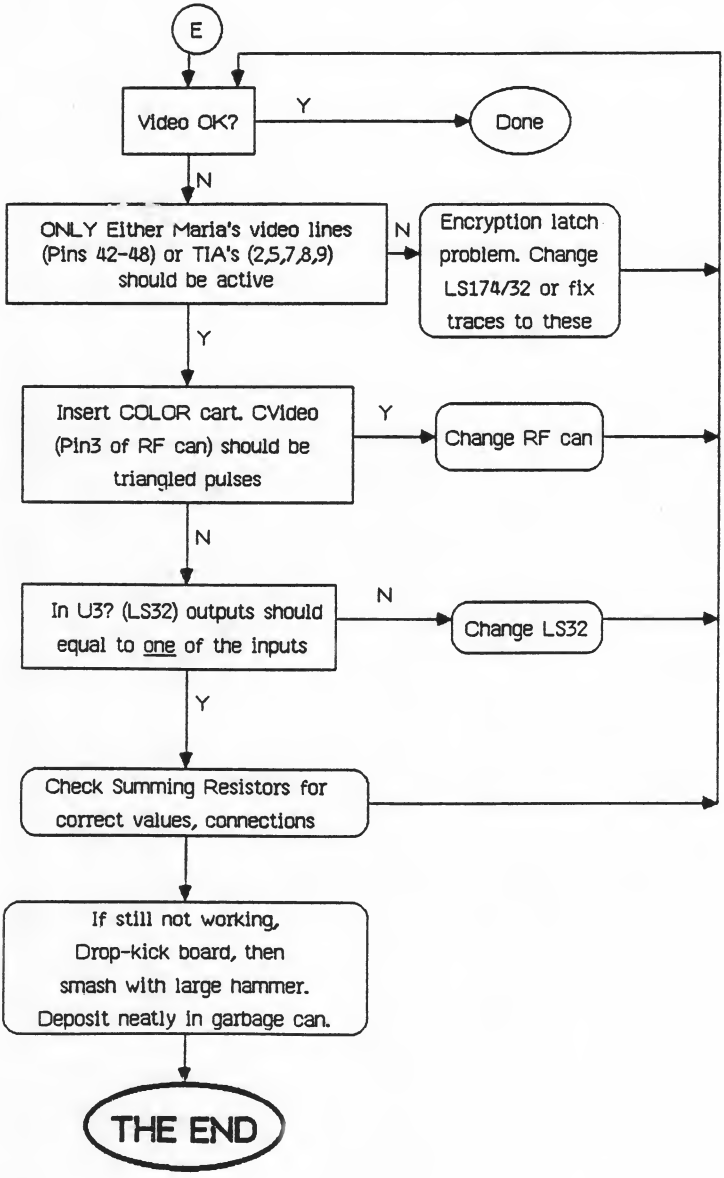

START
Press ON/OFF switch
Power
B
No Power
Check +5 on any chip
Y
Check LED connection and series resistor. Change as necessary
No Power
Check unreg DC
No
Change Power supply
Yes
Check 5.1V Zener at Pin 14 Of 4013
No
Check zener voltage divider and change as necessary
Yes
Check Pin3 of 4013 goes Low on depress-ion of ON/OFF switch
No
Reconnect (always H) or deshort (always L) connection from switch to Pin 3 4013
Check Pin13 4013 toggles on ON/OFF
No
Change 4013
Pin 13 toggles?
Yes
No
Yes
F
Check for short/open at RC of Q- to D feedback path.


F
Check collector Q9?
3904 toggles with ON/OFF
No
Check connections
or change 3904
Yes
Check emitter MJE210
>=9V
No
Check for break
between Unreg & 210
Yes
Check collector MJE210
toggles
always
Low
Change MJE210
OK
Check Input, output, ground
of Voltage Regulator
Wrong
Change
V Reg
OK
Break in connection
or short between
V Reg and LED
A
(START)


B
Insert Diagnostic cart
It runs
Follow proceedures outlined elsewhere
Nothing happens
Check pin 3,4 Maria for oscillator
N
Diagnose oscillator circuit
Y
Clock on pin 8 Maria?
N
Change Maria
Y
Clock on Sally pin 39?
N
Check connection Pin8 Maria via Resistor to Sally pin37. If connection OK, change Sally
Y
Ensure clock goes to
Maria pin6
J1 pin16
TIA pin26
6532 pin39
C


C
On power on, check Reset on pin40 Sally for short Low time before High.
OK
D
Check reset on LS32 output
Y
Join or unshort connection between LS32, Sally, 6532, LS174 as necessary
N
Check Reset on input LS32
Y
Change LS32
N
Check Reset- (Q) on 4013
Y
Fix open between 4013 &LS32
N
Change 4013
CReset always H or L?
L
Check RC on Set input of 4013
H
Fix break/short between R input and Q- output of other flop on 4013


D
Check RDY on Sally pin 2.
It should be High.
L
Find short or change
Maria or TIA if they
are responsible.
H
Check HALT- Sally pin 35.
It should be High or mainly High
if there is a display.
L
Find short
Check IRQ- Sally pin 4.
It should be mainly High
Find Short
E


E
Video OK?
Y
Done
N
ONLY Either Maria's video lines (Pins 42-48) or TIA's (2,5,7,8,9) should be active
N
Encryption latch problem. Change LS174/32 or fix traces to these
Y
Insert COLOR cart. CVideo (Pin3 of RF can) should be triangled pulses
Y
Change RF can
N
In U3? (LS32) outputs should equal to one of the inputs
N
Change LS32
Y
Check Summing Resistors for correct values, connections
If still not working, Drop-kick board, then smash with large hammer. Deposit neatly in garbage can.
THE END